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IS 891 (1991): Handloom worsted shirting [TXD 8: Handloom and Khadi]



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भारतीय मानक

हथकरघा निर्मित कमीज का वस्टेड कपड़ा

(पहला पुनरीक्षण)

Indian Standard

HANDLOOM WORSTED SHIRTING

(First Revision)

UDC 677.31.064.1 (083.75) (54)

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BUREAU OF INDIAN STANDARDS

MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG

NEW DELHI 110002

FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Handloom and Khadi Sectional Committee had been approved by the Textile Division Council.

This standard was first issued in 1958. It has now been revised in order to overcome certain difficulties encountered by the handloom industry in its implementation. Following are the important changes carried out while revising this standard:

- a) Only negative tolerances have been specified on ends/dm, picks/dm and mass to ensure minimum desirable construction. There being no tolerance on positive side on these requirements, it would provide flexibility to industry to adjust construction of the fabric depending upon market demands.
- b) Tolerances on length and width have been adopted from the instructions issued by the Central Government under the *Trade and Merchandise Marks Act 1958 (43 of 1958)* as given in *Notification No. S. O. 2937 dated 20 September 1962*.
- c) For determining the conformity of the cloth to the requirements laid down in this standard, a provision has been incorporated to allow testing of specimens in prevailing atmospheric conditions. However, in all cases of disputes, the specimens are to be tested after conditioning in the standard atmospheric conditions.
- d) Provision has been incorporated for agreement between the buyer and the seller with respect to the permissible number of defects in the cloth.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, in accordance with IS 2 : 1960 'Rules for rounding off numerical values (revised)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

HANDLOOM WORSTED SHIRTING

(First Revision)

1 SCOPE

1.1 This standard prescribes constructional particulars and other requirements for handloom worsted shirting.

1.2 This standard does not specify general appearance, feel, etc, of the cloth.

2 REFERENCES

The Indian Standards listed in Annex A are necessary adjuncts to this standard.

3 ATMOSPHERIC CONDITIONS FOR TESTING

Test specimens may be conditioned and tested in the prevailing atmosphere for determining the conformity of the cloth to this standard. However, in all cases of disputes, the specimens shall be conditioned and tested in the standard atmosphere as specified in the referred Indian Standards on test methods.

4 MANUFACTURE

4.1 Yarn

4.1.1 The yarn used in the manufacture of the cloth shall be spun from 60s top or noil, free from admixture of non-woollen fibre, and shall be such that the cloth produced complies with the requirements of this standard. The warp shall be worsted while the weft may be either single or 2-ply worsted or single woollen.

4.1.2 The approximate count of the yarn is given in Table 1 for guidance.

4.2 Cloth

4.2.1 The cloth shall be in 2/2 twill weave.

4.2.2 It shall be scoured and free from grease, soap, filling or any other admixture which would give it fictitious weight, substance or firmness.

4.2.3 It shall have a lightly milled finish.

4.3 Dyeing

4.3.1 The top, noil, yarn or cloth shall be dyed with suitable dyes to colours as agreed to between the buyer and the seller.

5 REQUIREMENTS

5.1 The cloth shall conform to the requirements specified in Table 1.

5.2 The cloth shall also conform to the requirements specified in Table 2.

5.3 Dimensions

The length and width of the cloth, when determined in accordance with IS 1954 : 1990, shall be as agreed to between the buyer and the seller or as declared by the seller subject to the tolerances specified in the *Government of India, Ministry of Commerce and Industry Notification No. S. O. 2937 dated 20 September 1962 issued under the Trade and Merchandise Marks Act, 1958 (43 of 1958)* (see Annex C).

5.4 Sealed Sample

If in order to illustrate or specify the indeterminate characteristics, such as general appearance, lustre, feel and shade, a sample has been agreed upon and sealed, the supply shall be in conformity with the sample in such respects.

The custody of the sealed sample shall be a matter of prior agreement between the buyer and the seller.

6 VISUAL INSPECTION

6.1 The cloth when visually inspected should be free from the major flaws listed in Annex D.

The number of permissible major flaws per unit length shall be as agreed to between the buyer and the seller.

6.2 For details of the flaws mentioned in 6.1, reference may be made to IS 4125 : 1987.

7 MARKING

7.1 The cloth shall be suitably marked with the following information:

- a) Name of the material,
- b) Length (m) and width (cm), and
- c) Indication of the source of manufacture.

7.2 The cloth may also be marked with the Standard Mark.

8 PACKING

Unless otherwise agreed upon by the buyer and the seller, the cloth shall be packed in bales or cases in accordance with the procedure laid down in IS 32 : 1971 or IS 741 : 1971.

Table 1 Constructional Particulars and Breaking Load Requirements for Handloom Worsted Shirting

(Clauses 4.1.2 and 5.1)

1) Approximate Count of Yarn		Ends/dm	Picks/dm	Mass	Breaking Load on 15 × 20 cm Strips	
Warp (1)	Weft (2)	(3)	(4)	(5)	Warpway (6)	Weftway (7)
40 tex × 2 (2/22s worsted)	80 tex (11s worsted or 24s woollen) or 40 tex × 2 (2/22s worsted)	160	160	g/m ² 270	N 608	N 548
Tolerance, percent	—	—	—5	—5	—5	—5 on average value, and —15 on individual reading
Method of Test	—	—	IS 1963 : 1981	IS 1964 : 1970 or Annex B	IS 1969 : 1985	

1) For guidance only.

Table 2 Other Requirements for Worsted Shirting

(Clause 5.2)

Sl No.	Characteristic	Requirement	Method of Test
(1)	(2)	(3)	(4)
i)	Relaxation shrinkage, percent, <i>Max</i>	4	IS 665 : 1989
ii)	pH value of aqueous extract	5.0 to 7.5	IS 1390 : 1983
iii)	Colour fastness:		
	a) Light	4 or better	IS 686 : 1985 or IS 2454 : 1985 IS 687 : 1979
	b) Washing, Test 1 :		
	1) Change in colour	4 or better	
	2) Staining on fabric	4 or better	
	c) Perspiration :		IS 971 : 1983
	1) Change in colour	4 or better	
	2) Staining on fabric	4 or better	

9 SAMPLING**9.1 Lot**

The quantity of cloth delivered to one buyer against one despatch note shall constitute a lot.

9.2 The conformity of a lot to the various requirements specified in the standard shall be

determined on the basis of tests carried out on the samples selected from it.

9.3 Unless otherwise agreed, the number of pieces to be selected at random for inspection shall be in accordance with Table 3.

For random selection of samples, IS 4905 : 1968 may be followed.

9.4 Number of Samples and Criteria for Conformity

The number of samples to be drawn and the criteria for conformity of the material for various characteristics shall be as follows:

Characteristics	Number of Samples	Criterion for Conformity
Ends, picks, mass, length, width and visual inspection	According to col 2 of Table 3	Number of non-conforming pieces shall not exceed the corresponding number given in col 3 of Table 3
Relaxation shrinkage, pH value, colour fastness and breaking load	According to col 4 of Table 3	All the pieces shall meet the requirement

Table 3 Sample Size and Permissible Number of Non-conforming Pieces

(Clauses 9.3 and 9.4)

Lot Size	Sample Size	Permissible Number of Non-conforming Pieces	Sub-sample Size
(1)	(2)	(3)	(4)
Up to 25	3	0	2
26 „ 50	5	0	2
51 „ 150	8	0	3
151 „ 300	13	1	3
301 „ 500	20	1	5
501 „ 1 000	32	2	5
1 001 and above	50	3	8

ANNEX A

(Clause 2)

LIST OF REFERRED INDIAN STANDARDS

IS No.	Title	IS No.	Title
32 : 1971	Code for seaworthy packaging of woollen and worsted yarn and cloth (<i>second revision</i>)	1954 : 1990	Methods for determination of length and width of fabrics (<i>second revision</i>)
665 : 1989	Textiles—Determination of dimensional changes of fabrics containing wool on soaking in water (<i>first revision</i>)	1963 : 1981	Methods for determination of threads per unit length in woven fabrics (<i>second revision</i>)
686 : 1985	Methods for determination of colour fastness of textile materials to daylight (<i>first revision</i>)	1964 : 1970	Methods for determination of weight per square metre and weight per linear metre of fabrics (<i>first revision</i>)
687 : 1979	Method for determination of colour fastness of textile materials to washing: Test 1 (<i>second revision</i>)	1969 : 1985	Methods for determination of breaking load and elongation of woven textile fabrics (<i>second revision</i>)
741 : 1971	Code for inland packaging of woollen and worsted yarn and cloth (<i>first revision</i>)	2454 : 1985	Methods for determination of colour fastness of textile materials to artificial light (xenon lamp) (<i>first revision</i>)
971 : 1983	Method for dermination of colour fastness of textile materials to perspiration (<i>first revision</i>)	4125 : 1987	Glossary of terms pertaining to defects in fabrics (<i>first revision</i>)
1390 : 1983	Methods for determination of pH value of aqueous extracts of textile materials (<i>first revision</i>)	4905 : 1968	Methods for random sampling

ANNEX B

(Table 1)

METHOD FOR DETERMINATION OF MASS OF FABRIC

B-1 Cut four specimens of 100 mm × 100 mm each from a sample. Condition all the specimens in a desiccator charged with saturated solution of sodium nitrate at $27 \pm 2^{\circ}\text{C}$ for a period of 24 hours. Remove all the specimens from the

desiccator and immediately determine their collective mass in a weighing balance to the nearest milligram.

B-2 Calculate the mass of the fabric in g/m².

ANNEX C

(Clause 5.3)

EXTRACTS FROM THE GOVERNMENT OF INDIA, MINISTRY OF COMMERCE AND INDUSTRY (TRADE AND MERCHANDISE MARKS) NOTIFICATION NO. S. O. 2937 DATED 20 SEPTEMBER 1962

- 1) *A trade description of length stamped on worsted, woollen and shoddy piece goods* — The actual length of the piece shall not be less than the stamped length.
- 2) *A trade description of width stamped on worsted, woollen and shoddy piece goods:*
 - i) In pieces of worsted fabric, the stamped width shall not be greater or less than the actual width, provided that the variation in width at any point is not more than 2 percent and on average not more than 1.5 percent; and
 - ii) In pieces of woollen and shoddy piece goods, the stamped width shall not be greater or less than the actual width, provided that the variation in width at any point is not more than 3 percent and on average not more than 2 percent.

ANNEX D

(Clause 6.1)

LIST OF MAJOR FLAWS

- 1) One or more ends missing in the body of the material throughout its length, more than three ends missing at a place and running over 60 cm, or prominently noticeable double ends running throughout the piece.
- 2) Undressed snarls noticeable over a length exceeding 5 percent of the length of the piece.
- 3) Smash definitely rupturing the texture of the fabric.
- 4) Hole, cut or tear.
- 5) Read marks prominently noticeable over a length exceeding 5 percent of the piece.
- 6) Defective or damaged selvage noticeable over a length exceeding 5 percent of the length of the piece.
- 7) Skewing of weft.
- 8) Weft crack or two or more missing picks across the width of the fabric.
- 9) Warp or weft bar due to difference in raw material, count, twist, lustre, colour, shade or spacing of adjacent groups of yarns (starting mark).
- 10) More than two adjacent ends running parallel, broken or missing and extending beyond 10 cm.
- 11) Noticeable warp or weft float in the body of the fabric.
- 12) Noticeable oil or other stain in the fabric.
- 13) Oily weft in the fabric.
- 14) Prominently noticeable slub.
- 15) Conspicuous broken pattern.
- 16) Gout due to foreign matter, usually lint or waste, woven into the fabric.
- 17) Prominent selvage defect.
- 18) Significant shading or listing having a gradual change in tone or depth of shade (excluding inselvage).
- 19) Coloured flecks.
- 20) Blurred or dark patch.
- 21) Patchy, streaky or uneven dyeing.
- 22) Dye bar.
- 23) Fuzzy appearance.

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